

SEQUENCE LISTING

<110> SIBBESEN, OLE
SORENSEN, JENS FRISBAEK

<120> PROTEINS

<130> 078883/0132

<140> 09/869,155

<141> 2001-06-25

<150> PCT/IB99/02071

<151> 1999-12-17

<150> GB 9828599.2

<151> 1998-12-23

<150> GB 9907805.7

<151> 1999-04-06

<150> GB 9908645.6

<151> 1999-04-15

<160> 19

<170> PatentIn Ver. 2.1

<210> 1

<211> 57

<212> PRT

<213> Artificial Sequence

<220>

<221> MOD_RES

<222> (17)

<223> Any Amino Acid

<220>

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<222> (43)

<223> Any Amino Acid

<220>

<221> MOD_RES

<222> (49)

<223> Any Amino Acid

<220>

<223> Description of Artificial Sequence: Synthetic
Xylanase Inhibitor

<400> 1

Leu Ala Val Val Ala Arg Ala Val Lys Asp Val Ala Pro Phe Gly Val
1 5 10 15

Xaa Tyr Asp Thr Lys Thr Leu Gly Asn Asn Leu Gly Gly Tyr Ala Val
20 25 30

000015-100464

<220>
<223> Description of Unknown Organism: Xylanase

Met Phe Lys Phe Lys Lys Lys Phe Leu Val Gly Leu Thr Ala Ala Phe
1 5 10 15

Tyr Trp Gln Asn Trp Thr Asp Gly Gly Gly Thr Val Asn Ala Val Asn
35 40 45

Val	Val	Gly	Lys	Gly	Trp	Thr	Thr	Gly	Ser	Pro	Phe	Arg	Thr	Ile	Asn
65					70					75					80

Tyr Gly Trp Thr Arg Ser Pro Leu Ile Glu Tyr Tyr Val Val Asp Ser
100 105 110

Asp Gly Gly Thr Tyr Asp Ile Tyr Thr Thr Thr Arg Tyr Asn Ala Pro
130 135 140

Gln Ser Lys Arg Pro Thr Gly Ser Asn Ala Ala Ile Thr Phe Ser Asn
165 170 175

Ala Tyr Gln Val Leu Ala Thr Glu Gly Tyr Lys Ser Ser Gly Ser Ser
195 200 205

<210> 4

<211> 642

<212> DNA

<213> Unknown Organism

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<223> Description of Unknown Organism: Xylanase

<400> 4

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atgttttcgg	caaccgcctc	tgcagctggc	acagattact	ggcaaaattg	gactgacggg	120
ggcgggacag	taaacgcgagt	caatggctct	ggcggaaatt	acagatttta	ttggtctaatt	180
accgggaatt	tcggttgttg	taaaggcttg	actacaggct	cgccattttag	aacaataaac	240
tataatgccg	gtgttttgggc	gccgaatggc	aatggatatt	taactttata	tggctggacg	300

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<210> 5
<211> 213
<212> PRT
<213> Bacillus subtilis
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Met Phe Lys Phe Lys Lys Asn Phe Leu Val Gly Leu Ser Ala Ala Leu
1 5 10 15

Met Ser Ile Ser Leu Phe Ser Ala Thr Ala Ser Ala Ala Ser Thr Asp
20 25 30

Tyr Trp Gln Asn Trp Thr Asp Gly Gly Gly Ile Val Asn Ala Val Asn
35 40 45

Gly Ser Gly Gly Asn Tyr Ser Val Asn Trp Ser Asn Thr Gly Asn Phe
50 55 60

Val Val Gly Lys Gly Trp Thr Thr Gly Ser Pro Phe Arg Thr Ile Asn
65 70 75 80

Tyr Asn Ala Gly Val Trp Ala Pro Asn Gly Asn Gly Tyr Leu Thr Leu
85 90 95

Tyr Gly Trp Thr Arg Ser Pro Leu Ile Glu Tyr Tyr Val Val Asp Ser
100 105 110

Trp Gly Thr Tyr Arg Pro Thr Gly Thr Tyr Lys Gly Thr Val Lys Ser
115 120 125

Asp Gly Gly Thr Tyr Asp Ile Tyr Thr Thr Thr Arg Tyr Asn Ala Pro
130 135 140

Ser Ile Asp Gly Asp Arg Thr Thr Phe Thr Gln Tyr Trp Ser Val Arg
145 150 155 160

Gln Ser Lys Arg Pro Thr Gly Ser Asn Ala Thr Ile Thr Phe Ser Asn
165 170 175

His Val Asn Ala Trp Lys Ser His Gly Met Asn Leu Gly Ser Asn Trp
180 185 190

Ala Tyr Gln Val Met Ala Thr Glu Gly Tyr Gln Ser Ser Gly Ser Ser
195 200 205

Asn Val Thr Val Trp
210

[illegible]

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ggcggtatag	taaacgctgt	caatgggtct	ggcgggaatt	acagtgttaa	ttggtctaatt	180	
accggaattt	ttgtttgttg	taaaggttgg	actacaggtt	cgccatttag	gacgataaac	240	
tataatgccg	gagttttggc	gccgaattgg	aatggatatt	tgactttata	tggttggacg	300	
agatcacctc	tcatagaata	ttatgtagt	gattcatggg	gtacttatag	acctactgga	360	
acgtataaag	gtactgtaaa	aagtgatggg	ggtacatatg	acatatatac	aactacacgt	420	
tataacgcac	cttccattga	tggcgatcgc	actactttta	cgcagtagct	gagtgttcgc	480	
cagtcgaaga	gaccaaccgg	aagcaacgct	acaattcactt	tcagcaatca	tgtgaacgca	540	
tggaagagcc	atggaatgaa	tctgggcagt	aattgggctt	accaagtcac	ggcgacagaa	600	
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<220>
<223> Description of Artificial Sequence: Synthetic
Mutant Xylanase

<400> 7															
Met	Phe	Lys	Phe	Lys	Lys	Asn	Phe	Leu	Val	Gly	Leu	Ser	Ala	Ala	Leu
1				5					10					15	
Met	Ser	Ile	Ser	Leu	Phe	Ser	Ala	Thr	Ala	Ser	Ala	Ala	Ser	Thr	Asp
			20					25					30		
Tyr	Trp	Gln	Asn	Trp	Thr	Asp	Gly	Gly	Gly	Thr	Val	Asn	Ala	Val	Asn
		35					40					45			
Gly	Ser	Gly	Gly	Asn	Tyr	Ser	Val	Asn	Trp	Ser	Asn	Thr	Gly	Asn	Phe
	50					55					60				
Val	Val	Gly	Lys	Gly	Trp	Thr	Thr	Gly	Ser	Pro	Phe	Arg	Thr	Ile	Asn
65					70					75					80
Tyr	Asn	Ala	Gly	Val	Trp	Ala	Pro	Asn	Gly	Asn	Gly	Tyr	Leu	Thr	Leu
				85					90					95	
Tyr	Gly	Trp	Thr	Arg	Ser	Pro	Leu	Ile	Glu	Tyr	Tyr	Val	Val	Asp	Ser
			100					105					110		
Trp	Gly	Thr	Tyr	Arg	Pro	Thr	Gly	Thr	Tyr	Lys	Gly	Thr	Val	Lys	Ser
		115					120					125			
Asp	Gly	Gly	Thr	Tyr	Asp	Ile	Tyr	Thr	Thr	Thr	Arg	Tyr	Asn	Ala	Pro
	130					135					140				
Ser	Ile	Asp	Gly	Asp	Arg	Thr	Thr	Phe	Thr	Gln	Tyr	Trp	Ser	Val	Arg
145					150					155					160

Gln Ser Lys Arg Pro Thr Gly Ser Asn Ala Ala Ile Thr Phe Ser Asn
 165 170 175

His Val Asn Ala Trp Lys Ser His Gly Met Asn Leu Gly Ser Asn Trp
 180 185 190

Ala Tyr Gln Val Leu Ala Thr Glu Gly Tyr Lys Ser Ser Gly Ser Ser
 195 200 205

Asn Val Thr Val Trp
 210

<210> 8
 <211> 642
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 Mutant Xylanase

<400> 8
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 ggcggtaccg taaacgctgt caatgggtct ggcgggaatt acagtgttaa ttggtctaata 180
 accggaaatt ttgtttgttg taaagggttg actacagggt cgccatttag gacgataaac 240
 tataatgccg gagtttgggc gccgaatggc aatggatatt taactttata tggttggacg 300
 agatcacctc tcatagaata ttatgtagtg gattcatggg gtacttatag acctactgga 360
 acgtataaag gtactgtaaa aagtgatggg ggtacatatg acatatatac aactacacgt 420
 tataacgcac cttccattga tggcgatcgc actactttta cgcagtactg gagggttcgc 480
 cagtcgaaga gaccaaccgg aagcaacgct gctatcactt tcagcaatca tgtgaacgca 540
 tggaagagcc atggaatgaa tctgggcagt aattgggctt accaagtcct cgcgacagaa 600
 ggatataaaa gttccggaag ttctaacgta acagtgtggt aa 642

<210> 9
 <211> 213
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 Mutant Xylanase

<400> 9
 Met Phe Lys Phe Lys Lys Asn Phe Leu Val Gly Leu Ser Ala Ala Leu
 1 5 10 15

Met Ser Ile Ser Leu Phe Ser Ala Thr Ala Ser Ala Ala Ser Thr Asp
 20 25 30

Tyr Trp Gln Asn Trp Thr Asp Gly Gly Gly Thr Val Asn Ala Val Asn
 35 40 45

Gly Ser Gly Gly Asn Tyr Ser Val Asn Trp Ser Asn Thr Gly Asn Phe
 50 55 60

00000455 = 400404

Val Val Gly Lys Gly Trp Thr Thr Gly Ser Pro Phe Arg Thr Ile Asn
65 70 75 80

Tyr Asn Ala Gly Val Trp Ala Pro Asn Gly Asn Gly Tyr Leu Thr Leu
85 90 95

Tyr Gly Trp Thr Arg Ser Pro Leu Ile Glu Tyr Tyr Val Val Asp Ser
100 105 110

Trp Gly Thr Tyr Arg Pro Thr Gly Thr Tyr Lys Gly Thr Val Lys Ser
115 120 125

Asp Gly Gly Thr Tyr Asp Ile Tyr Thr Thr Thr Arg Tyr Asn Ala Pro
130 135 140

Ser Ile Asp Gly Asp Asn Thr Thr Phe Thr Gln Tyr Trp Ser Val Arg
145 150 155 160

Gln Ser Lys Arg Pro Thr Gly Ser Asn Ala Ala Ile Thr Phe Ser Asn
165 170 175

His Val Asn Ala Trp Lys Ser His Gly Met Asn Leu Gly Ser Asn Trp
180 185 190

Ala Tyr Gln Val Leu Ala Thr Glu Gly Tyr Lys Ser Ser Gly Ser Ser
195 200 205

Asn Val Thr Val Trp
210

<210> 10
<211> 642
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
Mutant Xylanase

<400> 10
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ttgttttcgg caaccgcctc tgcagctagc acagactact ggcaaaattg gactgatggg 120
ggcgggtaccg taaacgctgt caatgggtct ggcgggaatt acagtgttaa ttggtctaatt 180
accggaaatt ttgttggttg taaagggttg actacaggtt cgccatttag gacgataaac 240
tataatgccg gagtttgggc gccgaatggc aatggatatt taactttata tggttgacg 300
agatcacctc tcatagaata ttatgtagt gattcatggg gtacttatag acctactgga 360
acgtataaag gtactgtaaa aagtgatggg ggtacatatg acatatatac aactacacgt 420
tataacgcac cttccattga tggcgataat actactttta cgcagtactg gagtgttcgc 480
cagtcgaaga gaccaaccgg aagcaacgct gctatcactt tcagcaatca tgtgaacgca 540
tggaagagcc atggaatgaa tctgggcagt aattgggctt accaagtcct cgcgacagaa 600
ggatataaaa gttccggaag ttctaacgta acagtgtggt aa 642

<210> 11
<211> 213

09669455-100404
TOTAL: 5576960

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Mutant Xylanase

<400> 11

Met	Phe	Lys	Phe	Lys	Lys	Asn	Phe	Leu	Val	Gly	Leu	Ser	Ala	Ala	Leu
1				5					10					15	

Met	Ser	Ile	Ser	Leu	Phe	Ser	Ala	Thr	Ala	Ser	Ala	Ala	Ser	Thr	Asp
			20					25					30		

Tyr	Trp	Gln	Asn	Trp	Thr	Asp	Gly	Gly	Gly	Thr	Val	Asn	Ala	Val	Asn
		35					40					45			

Gly	Ser	Gly	Gly	Asn	Tyr	Ser	Val	Asn	Trp	Ser	Asn	Thr	Gly	Asn	Phe
	50					55					60				

Val	Val	Gly	Lys	Gly	Trp	Thr	Thr	Gly	Ser	Pro	Phe	Arg	Thr	Ile	Asn
65					70					75					80

Tyr	Asn	Ala	Gly	Val	Trp	Ala	Pro	Asn	Gly	Asn	Gly	Tyr	Leu	Thr	Leu
				85					90					95	

Tyr	Gly	Trp	Thr	Arg	Ser	Pro	Leu	Ile	Glu	Tyr	Tyr	Val	Val	Asp	Ser
			100					105					110		

Trp	Gly	Thr	Tyr	Arg	Pro	Thr	Gly	Thr	Tyr	Lys	Gly	Thr	Val	Lys	Ser
		115					120					125			

Asp	Gly	Gly	Thr	Tyr	Asp	Ile	Tyr	Thr	Thr	Thr	Arg	Tyr	Asn	Ala	Pro
	130					135					140				

Ser	Ile	Asp	Gly	Asp	Asn	Thr	Thr	Phe	Thr	Gln	Tyr	Trp	Ser	Val	Arg
145					150					155					160

Gln	Ser	Lys	Arg	Pro	Thr	Gly	Ser	Asn	Ala	Thr	Ile	Thr	Phe	Ser	Asn
				165					170					175	

His	Val	Asn	Ala	Trp	Lys	Ser	His	Gly	Met	Asn	Leu	Gly	Ser	Asn	Trp
		180						185					190		

Ala	Tyr	Gln	Val	Met	Ala	Thr	Glu	Gly	Tyr	Gln	Ser	Ser	Gly	Ser	Ser
		195					200					205			

Asn	Val	Thr	Val	Trp
	210			

<210> 12

<211> 642

<212> DNA

<213> Artificial Sequence

0066455-100101

<220>

<223> Description of Artificial Sequence: Synthetic
Mutant Xylanase

<400> 12

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ggcgggtaccg taaacgctgt caatgggtct ggcgggaatt acagtgttaa ttggtctaata 180
accggaaatt ttgttggttg taaagggttg actacaggtt cgccatttag gacgataaac 240
tataatgccg gagtttgggc gccgaatggc aatggatatt taactttata tggttggacg 300
agatcacctc tcatagaata ttatgtagtg gattcatggg gtacttatag acctactgga 360
acgtataaag gtactgtaaa aagtgatggg ggtacatatg acatatatac aactacacgt 420
tataacgcac cttccattga tggcgataat actactttta cgcagtactg gactgttcgc 480
cagtcgaaga gaccaaccgg aagcaacgct acaatcactt tcagcaatca tgtgaacgca 540
tggaagagcc atggaatgaa tctgggcagt aattgggctt accaagtcac ggcgacagaa 600
ggatatcaaa gtagtggaag ttctaacgta acagtgtggt aa 642

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<210> 13

<211> 35

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Xylanase Inhibitor

<400> 13

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Gly Ala Pro Val Ala Arg Ala Val Glu Ala Val Ala Pro Phe Gly Val
  1              5              10              15
Cys Tyr Asp Thr Lys Thr Leu Gly Asn Asn Leu Gly Gly Tyr Ala Val
              20              25              30
Pro Asn Val
              35

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<210> 14

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Xylanase Inhibitor

<400> 14

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Lys Arg Leu Gly Phe Ser Arg Leu Pro His Phe Thr Gly Cys Gly Gly
  1              5              10              15
Leu

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<210> 15

<211> 21

<212> PRT

<213> Artificial Sequence

00000155:400101

<220>

<223> Description of Artificial Sequence: Synthetic
Xylanase Inhibitor

<400> 15

Leu Pro Val Pro Ala Pro Val Thr Lys Asp Pro Ala Thr Ser Leu Tyr
1 5 10 15Thr Ile Pro Phe His
20

<210> 16

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Xylanase Inhibitor

<400> 16

Leu Leu Ala Ser Leu Pro Arg Gly Ser Thr Gly Val Ala Gly Leu Ala
1 5 10 15Asn Ser Gly Leu Ala Leu Pro Ala Gln Val Ala Ser Ala Gln Lys
20 25 30

<210> 17

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Xylanase Inhibitor

<400> 17

Gly Gly Ser Pro Ala His Tyr Ile Ser Ala Arg Phe Ile Glu Val Gly
1 5 10 15Asp Thr Arg Val Pro Ser Val Glu
20

<210> 18

<211> 13

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
Xylanase Inhibitor0066455-4004
"EST" 000000

<400> 18

Val Asn Val Gly Val Leu Ala Ala Cys Ala Pro Ser Lys
 1 5 10

<210> 19

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 Xylanase Inhibitor

<400> 19

Val Ala Asn Arg Phe Leu Leu Cys Leu Pro Thr Gly Gly Pro Gly Val
 1 5 10 15

Ala Ile Phe Gly Gly Gly Pro Val Pro Trp Pro Gln Phe Thr Gln Ser
 20 25 30

Met Pro Tyr Thr Leu Val Val Val Lys
 35 40

05659455-400104
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